

STUDIES ON *LEPOCREADIOIDES SRIVASTAVAI* n.sp. FROM MARINE
FISHES AT ERNAKULAM (SOUTH INDIA)

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ABSTRACT

This paper deals with the description of a new species, *Lepocreadioides srivastavai*, collected from *Cynoglossus cynoglossus* and *Cynoglossus lingua* (marine fishes) from Ernakulam (South India). Body: 1.147–1.209 × 0.504–0.576 mm. in size with slightly crenated margins. Oral sucker: subterminal. Prepharynx: very short. Testes: longitudinally elliptical, lying diagonally behind anterior half of body, one on either side of median line. Genital pore: to left of oral sucker in level with anterior border of the latter. Ovary: consists of five pear-shaped lobes, situated left to median axis. Vitellaria: in form of irregular follicles, extending from a little behind crural fork to a little in front of posterior extremity and then take a turn upwards up to just behind the testes.

The validity of the new species has been discussed.

OBSERVATIONS

Family **Allocreadiidae** Stossich, 1903
Subfamily **LEPOCREADIINAE** Odhner, 1905
Genus *Lepocreadioides* Yamaguti, 1936

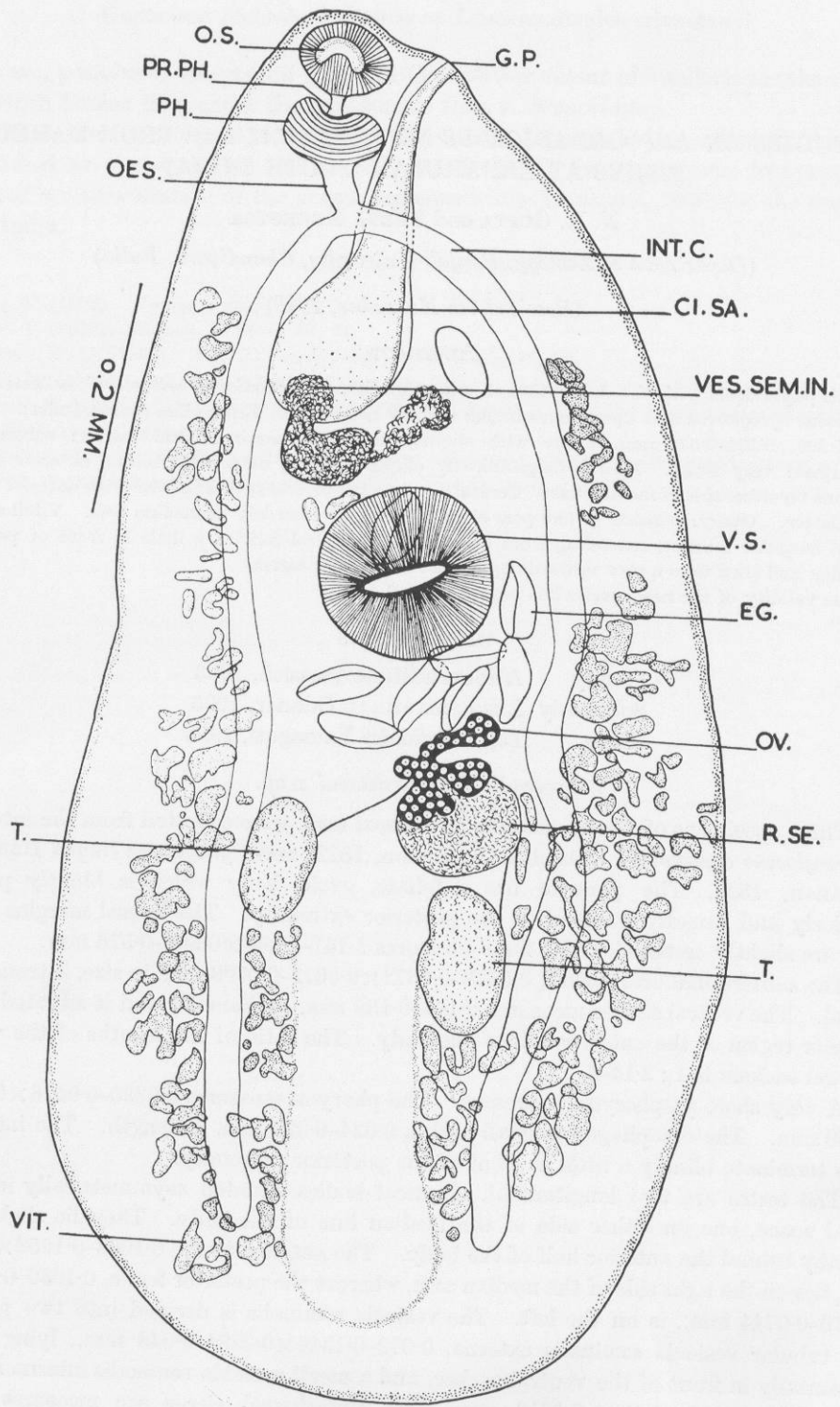
Lepocreadioides srivastavai n.sp.

Three specimens of *Lepocreadioides srivastavai* n.sp. were collected from the intestines of *Cynoglossus cynoglossus* (Hamilton-Buchanan, 1822) and *Cynoglossus lingua* Hamilton-Buchanan, 1822. The parasite has a foliate, ovoid body which is bluntly pointed anteriorly and broadly rounded at the posterior extremity. The lateral margins of the body are slightly crenated. The fluke measures 1.147–1.209 × 0.504–0.576 mm.

The subterminal oral sucker, 0.0528–0.0672 × 0.0672–0.0768 mm. in size, is transversely oval. The ventral sucker measures 0.144–0.158 mm. in diameter and is situated in the posterior region of the anterior half of the body. The ratio of the lengths of the ventral and oral suckers is 2.14–3.

A very short prepharynx is present. The pharynx measures 0.0336–0.0576 × 0.0818–0.0868 mm. The oesophagus is small and is 0.024–0.033 mm. in length. The intestinal caeca terminate blindly a little in front of the posterior extremity.

The testes are two longitudinal, elliptical bodies situated asymmetrically in inter-caecal space, one on either side of the median line of the body. They lie slightly diagonally behind the anterior half of the body. The anterior testis, 0.1008–0.1058 × 0.0576 mm., lies on the right side of the median axis, whereas the posterior testis, 0.1056–0.1296 × 0.0576–0.0744 mm., is on the left. The vesicula seminalis is divided into two parts: a long tubular vesicula seminalis externa, 0.072–0.1346 × 0.0384–0.048 mm., lying almost horizontally in front of the ventral sucker, and a small vesicula seminalis interna measuring 0.0344–0.0912 × 0.0384–0.0818 mm. The club-shaped cirrus sac measures 0.336–0.384 mm. in length and 0.1038–0.1052 mm. in maximum breadth which occurs at its



Lepocreadioides srivastavai n.sp.

end enclosing vesicula seminalis interna. The cirrus sac extends obliquely from the shallow genital atrium to the right, a little in front of the ventral sucker. The genital atrium is situated to the left of the oral sucker in level with its anterior border.

The ovary, 0.0576×0.0768 mm., consists of five pear-shaped lobes which join mesially, and is situated on the left of the median axis. The receptaculum seminis is post-ovarian and is a somewhat rounded sac measuring $0.0576-0.0624 \times 0.1008-0.1056$ mm. and lying in front of the posterior testis. The vitellaria are composed of small, irregular follicles extending along the caeca from the level of a little behind intestinal bifurcation to the posterior blind ends of caeca, where they turn round and extend up to the level of receptaculum seminis. The follicles overlap the caeca at several places. The uterine coils occupy the median space between the ventral sucker and testes. The eggs are not numerous and measure $0.0672-0.720 \times 0.0336 \times 0.048$ mm.

DISCUSSION

The genus *Lepocreadioides* Yamaguti, 1936, comprises four already known species, namely *Lepocreadioides branchiostegi* Yamaguti, 1937; *L. indicum* Srivastava, 1941; *L. orientale** Park, 1939; and *L. zebrini* Yamaguti, 1936.

The new species *Lepocreadioides srivastavai* has an ovoid body with bluntly pointed anterior end and broadly rounded off posterior; the cuticle is devoid of spines or saclcs; the ratio of the lengths of the oral and ventral suckers is 1:2.14-3; a very short prepharynx and a small oesophagus are present; ovary is multilobed; receptaculum seminis is almost circular; and the vitellaria do not reach the intestinal fork anteriorly.

The present form has been carefully compared with all the known species of the genus *Lepocreadioides* except *L. orientale* Park, 1939.

On account of its shape and the non-spinous character of the body the new species *Lepocreadioides srivastavai* differs from all the known species in which the cuticle is either wholly armed with minute spines or the latter are restricted to the pre-acetabular zone as in *L. indicum*.

The new species deviates from *L. indicum* in the absence of the median incision at the posterior margin of the body, in having the body margins which are not crenated, in having penta-lobed ovary and the rounded receptaculum seminis (in *L. indicum* the body margins are deeply crenated; conspicuous median incision at the posterior margin of the body is present; ovary is trilobed and the receptaculum seminis is somewhat triangular in shape).

The new species stands apart from *L. zebrini* in which intestinal caeca are quite wide, ovary is tetralobed, receptaculum seminis is triangular, the vitellaria extend anteriorly up to the intestinal fork and the testes are quite large and closely situated.

The present form also stands close to *L. branchiostegi* in having prepharynx and oesophagus but general body shape, shape and size of the oral sucker, testes, shape of

Abbreviations:

CI.SA.—cirrus sac; *EG.*—egg; *G.P.*—genital pore; *INT.C.*—intestinal caecum; *O.S.*—oral sucker; *OES.*—oesophagus; *OV.*—ovary; *PH.*—pharynx; *PR.PH.*—prepharynx; *R.SE.*—receptaculum seminis; *T.*—testis; *V.S.*—ventral sucker; *VES.SEM.IN.*—vesicula seminalis interna; *VIT.*—vitellaria.

* Account of *Lepocreadioides orientale* Park, 1939, was not available.

cirrus sac, position of the genital pore and the anterior extent of vitellaria are the characters which further distinguish the new species from *L. branchiostegi*.

Taking into consideration the above differences, *Lepocreadioides srivastavai* has been established as a new species and named after Dr H. D. Srivastava who has previously reported a representative of the genus *Lepocreadioides* Yamaguti, 1936, for the first time from India.

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